IOP Conference Series: Materials Science and Engineering 2015 vol.86 N1

High voltage high repetition rate pulse using Marx topology

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Abstract

© Published under licence by IOP Publishing Ltd. The paper describes Marx topology using MOSFET transistors. Marx circuit with 10 stages has been done, to obtain pulses about 5.5KV amplitude, and the width of the pulses was about 30μsec with a high repetition rate (PPS > 100), Vdc = 535VDC is the input voltage for supplying the Marx circuit. Two Ferrite ring core transformers were used to control the MOSFET transistors of the Marx circuit (the first transformer to control the charging MOSFET transistors, the second transformer to control the discharging MOSFET transistors).

http://dx.doi.org/10.1088/1757-899X/86/1/012002

Keywords

High Voltage Pulse, Marx Topology, MOSFET transistors